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Investment in Education Technology Surges around the World

In an era marked by profound technological disruption and intense global competition in new frontier industries, emerging markets are striving to improve and adapt their education systems to reconcile the demands of the modern economy and the needs of citizens. As such, innovative solutions are being developed to address barriers within traditional education systems. Therefore, education technology (EdTech) is gaining traction worldwide as an invaluable teaching and learning tool. However, development of global EdTech has been somewhat uneven, with its implementation delayed in some countries due to infrastructure deficits and tight budgets. Nevertheless, the surge in investment in the last few years indicates the substantial potential for technology to enhance the quality of education globally in a variety of ways.



Appetite for Innovation

EdTech companies in developed countries came into prominence in the early 2000s. In the US, the subsector's advent was made possible by well-developed nationwide ICT networks, a large economy and successful innovation hubs, such as Silicon Valley. By 2018 the US EdTech market had grown to be worth more than \$8.38bn, according to the Software and Information Industry Association. In Europe, the center for EdTech is the UK, home to around 1000 EdTech companies, 200 of which are based in London.

Although the US and the UK have traditionally led the field, Asia has quickly become the fastest-growing market, with the region forecast to represent 54% of the EdTech market by 2020. Asia is home to over 600m K-12 students and is the emerging global center for online education. Many Asian countries place a premium on education, and both governments and parents are willing to spend a substantial amount on such services, particularly in the region's developed markets. Parents in Singapore, for example, spend an average of more than \$70,000 each year to educate their children, while over 70% of secondary school students in Hong Kong, Taiwan and South Korea hire private tutors after school. While parents in emerging markets in Asia have less discretionary spending power, there lies great potential in these countries to utilize their burgeoning innovation ecosystems and develop new, cost-effective EdTech solutions. For example, the value of Indonesian tech company Ruangguru was estimated by the country's Ministry of Communications and Information Technology to reach over \$1bn in 2019, as it rolls out its one-stop learning services app across South-east Asia.

Booming Demand

Meanwhile the Middle East is also moving forward with its own EdTech developments, particularly in the Gulf region. A 2016 education report by regional investment bank Alpen Capital suggests that more than 50,000 schools are needed across the region to accommodate an expected 20% increase in the student population to around 15m by 2020. India based market intelligence firm Ken Research forecasts that the education market in Saudi Arabia alone will expand at a compound annual growth rate of 12.3% over the three years to 2021, reaching an estimated value of \$15bn. Forbes estimates there are 270 EdTech start-ups in the Middle East, some of which have tapped into gaming, machine learning and artificial intelligence (AI) to transform the learning environment. However, the Middle East's EdTech economy is still in its infancy, indicating expansive room for further investment and strategic partnerships. According to Forbes, less than 1% of global funding for tech start-ups in 2017 went to countries in the Middle East, while approximately 22% went to China and India collectively, highlighting a need for more diversified economic expansion in the future.

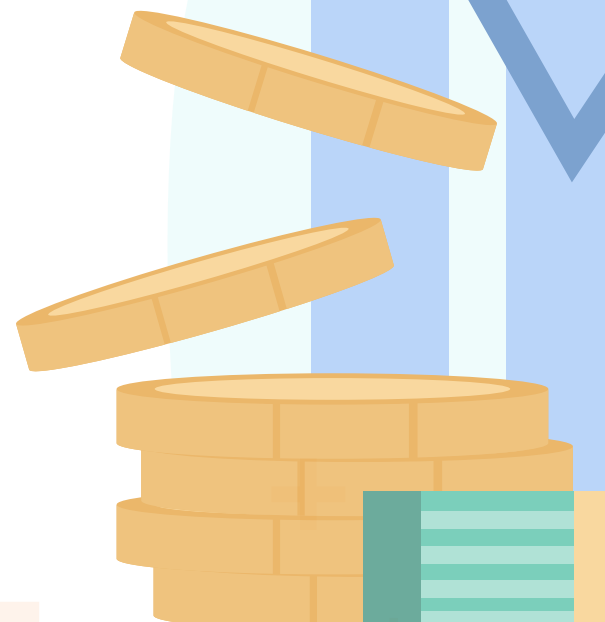
Latin America and Africa have developed their own burgeoning EdTech ecosystems. E-learning revenues in Latin America grew by 14.6% each year between 2013 and 2016 to \$2.2bn, so that by 2018 it was the world's fourth-largest EdTech market in terms of revenues, after North America, Western Europe and Asia. Markets in the region have particularly benefitted from their proximity to the US, which has allowed them to speed up the development of learning management solutions. Meanwhile, African countries have leveraged the dramatic take-up of mobile devices over the years to provide education to previously hard-to-reach areas via mobile learning apps. At the outset of 2018, there were approximately 700m mobile phone subscribers, equating to 60% of the population, with this figure forecast to hit 1bn by roughly 2020.

Growing Investment

Given the huge potential, it is unsurprising that there is an influx of investment in EdTech. Looking forward, education stakeholders in less developed markets are increasingly viewing technology as a means to bridge gaps in education infrastructure and teaching resources. "With increasing infrastructure development in Indonesia there will be plenty of opportunities for EdTech to supplement the education system in the country," Azhar Sunaryo, director of Primagama Tutoring Institution in Indonesia, told OBG. "However, the value of face-to-face teaching will remain irreplaceable." US-based research institute Metaari reports that global investment in learning technology companies reached a record \$16.3bn in 2018, breaking the previous record of \$9.6bn in 2017. In particular, there has been a significant increase in investments made in EdTech companies that specialize in augmented reality, AI, neuroscience and cognitive science.

Another consistent trend over the past few years is the enormous amount of money being invested in companies in Asia, with 2018 marking the first year China took the top spot by attracting 44.1% of global funding and surpassing long-time global leader the US with 32%. Out of the 12 companies that raised more than \$200m in 2018, 11 were from China. While China and the US dominate the industry, there is increasing investment activity in emerging regions such as Latin America. As of the end of 2017, the International Finance Corporation had spearheaded over \$450m in investments to online learning institutions in Brazil and the Pacific Alliance countries, namely Chile, Colombia, Mexico and Peru. Although Brazil appears to be the biggest market in the region, investors are increasingly interested in Pacific Alliance members because of their common language, educational uniformity and higher GDP.

A number of Latin American countries are also applying e-learning tools at the corporate level. According to a survey carried out by US-based Kaagan Research Associates, approximately 41% of companies in Mexico and Brazil use digital solutions to train their staff in marketing, technical documentation and customer support. This is closely followed by Colombia (39%), Argentina (30%) and Chile (30%). The firm also found that among the 58% of companies in the region which have not adopted digital solutions, 32% claimed they were likely use them in the future.



Government Support

With regard to public policy, there has also been widespread support. In Asia, several governments have taken steps to adopt e-learning tools as part of wider efforts to transition into digital economies. The authorities in Thailand, for example, are looking to improve the country's English proficiency by using AI to assess students' writing and speaking skills online. It also launched a free mobile app called Echo English in 2016 to encourage its citizens to practice conversational English through games. Elsewhere, in December 2017 the Department of Education in the Philippines launched a new K-12 curriculum that stipulates the inclusion of media and information literacy as a core subject in public schools. The goal is to give students the skills needed to succeed in a digital economy.

Governments in the Middle East likewise see education as key to progress and economic development, allocating as much as 19% of their budgets to schools in 2018 – well above the global average. The UAE Ministry of Education has indicated its willingness to support e-learning initiatives as tools to improve delivery in a market that is expected to expand by 60% to be worth \$7.1bn in 2023, while the Ministry of Education in Egypt announced in October 2018 that 2500 secondary schools had been connected to fibre-optic internet or Wi-Fi, as part of its plans to give every student studying at that level a tablet computer.

In Latin America, governments are also investing a substantial amount of resources in EdTech to improve learning outcomes. To expand access to rural areas, the Mexican government is implementing a distance learning program called Telesecundaria, which will provide lectures to secondary students through a network of satellite televisions. "While only 50% of the population in Mexico has internet access, this figure is quickly increasing due to the government reforms in telecommunications," Jose Antonio Quesada, director of the Egade Business School, told OBG. "These initiatives make online programs possible and can be used to complement existing learning techniques." In line with these goals, several US-based companies travelled to Latin America in 2018 to explore the possibility of establishing more programs in the region.

Transformational Potential

Indeed, as digital methods of teaching and learning proliferate across the globe, they are having a democratizing effect by widening overall access to information. Online programs are being leveraged in a number of emerging economies in Asia to address disparities in both access and quality. "Technology allows us to keep the quality of education consistent between different cities because it enables us to teach two or more classes at the same time. Therefore, no one will be able to say that students in Yangon are far more advanced than students in Mandalay or Myitkyina, for example," U Tin Maung Win, managing director of the International Language and Business Centre Myanmar, told OBG.

Massive open online courses (MOOCs) have also become widely accessible throughout Indonesia, enabling users to learn anytime and anywhere. In a similar way, EdTech has provided some much-needed support for teachers working in refugee camps in the Middle East. For instance, the non-profit platform Edraak, which provides MOOCs in Arabic, was launched in 2018 for refugee children in Jordan, Egypt and Syria. The platform gives students access to sequential learning materials and allows teachers to successfully create more interactive and engaging learning experiences.

